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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/575,601
Filing Date: April 12, 2006
Appellant(s): BREUER ET AL.

Friedrich Kueffner
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 12, 2020 appealing from the Office action mailed March 4, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,497,191	Langer et al.	2-1985
JP 05161902 A	Konose et al.	6-1993
US 2003/0051525	Kramer	3-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4, and 6-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer (EP 0781609) [see English equivalent US 2003/0051525] in view of Konose et al (JP 05-161902) and Langer et al. (US Patent 4,497,191). Kramer discloses a mill set up including at least on stand in a reversible roughing train (1), at least one stand in a finishing train (3), an upstream and down stream coiler (5, 6) such that the distance between the roughing train and the finishing train allows the two to act in simultaneous tandem operation (Figure 2).

Konose is relied upon to teach the use of reversible tandem 2-high roughing stands in a hot mill operation for the purpose of improving temperature profile of the metal material. Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention, to have provided the roughing stands of Kramer as 2-high tandem type in order to better control the temperature profile of the metal strip.

Langer is relied upon to teach that it is known and advantageous utilize reversible tandem finishing stands (4) in a hot rolling operation (figures 1-2) for the purpose of minimizing the length of the mill and controlling the temperature of the metal strip. Therefore it would have been obvious to utilize the reversible tandem set up of the finishing stands as taught by Langer in the set up of Kramer for the purpose of shortening the mill length while at the same time controlling the temperature of the strip metal being rolled.

Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer (EP 0781609), Konose et al (JP 05-161902) and Langer et al (US Patent 4,497,191), as stated above, and further in view of Ginzburg (US Patent 6,182,490). Kramer, as modified by Konose and Langer discloses most of the claimed limitations including a shear (4). The references fail to teach that shear (4) is a flying type shear, a furnace unit, a cropping shear and an edging stand as required. However the use of a flying type shear for shear (4) of Kramer would have been obvious since the examiner takes official notice that such shears are well known to be utilized and the use of such would depend on the cost and productivity desired in the mill.

Ginsburg is relied upon to teach that it is known to provide complete installations such as that of Kramer with a cropping shear (3) for cutting the strip into desired slabs, a furnace (5) for heating the strip to the desired workable temperature and an edging stand (10) for cutting the edges and ends of the work material (figure 3). Therefore it would have been obvious to include a cropping shear for cutting the strip into desired slabs, a furnace for heating the strip to the desired workable temperature and an edging stand for cutting the edges and ends of the work material in the mill in Kramer for the reasons stated.

With respect to claim 9, the method steps would have been obvious in lieu of the above references, for example, the conveyance of the hot initial product into the mill is inherent in Kramer, reverse roughing of the product is taught by Kramer (see English equivalent US20030051525 including abstract, especially paragraph 0019), initial cropping is taught by Ginsburg and use of shear (3) in order to cut the material to length, while the reverse rolling of in the finishing train including coiling and uncoiling is taught by Langer for the purpose of

providing the material with the desired finished thickness while being held the desired working temperature.

(10) Response to Argument

Appellant states that "Kramer explicitly teaches a single preparation stand and a single finishing stand, and gives no teaching concerning the rolling of aluminum with multiple two finishing stands" page 7, lines 1-2. Kramer discloses at least one reversing roughing stand (1) and at least one finishing stand (3), as seen in Figure 1. The examiner points out that the Langer et al. is relied upon to teach two reversing finishing stands (4), as seen in Figures 1 and 3. Additionally, lacking any clear distinguishing features, the train of Kramer is capable of rolling aluminum metal and the use of such would have been obvious as it would only depend on the desired product and since it is well known to roll such products in metals mills as attested to by the appellant in their specification pages 1-2 and Figure 3.

Appellant states that "Konose et al. teach a roughing stand (there is no teaching of a finishing stand) that rolls in tandem and puts out rough strip for the finishing train. From the drawing of Konose et al. one can see that there is a connecting unit or looping pit. There is no direct connection from the tandem roughing train to the finishing train. This means that the rough strip must lie at least once on the flat train. Therefore, the spacing between the roughing train and the finishing train is fixed. There is no teaching of combining the roughing and finishing into a tandem operation in order to reduce mill lengths" page 7, lines 3-13. Kramer states in Paragraph 0032 of the US PGPub and similarly in Paragraph 0008, "In accordance with the method of the present invention, during tandem rolling, the rolling speeds of the roughing stand 1 and the

finishing stand 3 are synchronized." While Kramer set forth tandem rolling between roughing and finishing stands, Konose et al. is relied upon to teach multiple (two) reversing mode roughing mills (2 and 3), Abstract.

Appellant states on page 7, lines 13-22, that "In Langer et al. it is impossible to reverse roll the strip in the roughing stand. Furthermore, the described finishing stand would make very difficult an effective strip finishing that can be directly connected with large strip lengths. In the presently claimed invention there is a tandem rolling of the roughing and finishing stands, for which the mill of Langer et al. is not suited because the roughing train does not reverse. The roughing stand of Langer et al. remains stationary during the finish rolling, while in the present invention the rolling of the next strip is possible." The examiner does not interpret Langer et al. having a reversing roughing stand, as that limitation it is already set forth by primary reference Kramer, instead Langer et al. is relied upon to teach that it advantageous to utilize multiple (two) reversing finishing stands (4), [Column 2, line 43]. It is also noted that the "strip lengths" are not stated in the claim language. .

Appellant states that "A combination of these three references does not teach or suggest the present invention. The combination of references would not result in a tandem operation since there is no showing of a reversing roughing train in Konose et al. and Langer et al.," page 8, lines 1-4. Kramer sets forth roughing and finishing stands in tandem operation in paragraphs 008 and 0032 while Konose et al. teaches hot rolling equipment having multiple reversing roughing mills (2 and 3) as stated in the English abstract.

Appellant states on page 8, lines 7-11, that " Furthermore, the combination does not teach a rolling mill or a method for hot rolling aluminum in which the roughing train does not include

a coiler, whereby the rolling stock passes directly from the roughing train to the finishing train, as in the presently claimed invention." Kramer discloses a roughing train 1 without a coiler as seen in Figure 1. The examiner recognizes that the limitation "whereby the rolling stock passes directly from the roughing train to the finishing train" is represented in appellant's Figure 1. Figure 1 has the following elements in sequence from right to left of: roughing stand 9, flying shear 10, coiler 15, trimming shear 16, and finishing stand 11, substantially similar to Kramer's Figure 1.

Appellant states on page 8, lines 15-23 and page 9, lines 1-2, that the advantage of temperature is not set forth in the references. The examiner points out that such features are not required by the current claim language.

In response to applicant's arguments that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the knowledge is generally available to one of ordinary skill in the art of rolling mills.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Teresa M. Bonk/

Examiner, Art Unit 3725

Conferees:

/Dana Ross/

Supervisory Patent Examiner, Art Unit 3725

/Nathan J. Newhouse/

Supervisory Patent Examiner, Art Unit 3782